



2613

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ioannis Pavlidis

Group Art Unit: 2613

Serial No.: 10/034,696

Examiner: Unassigned

Filed: Dec. 27, 2001

Docket No.: 115.00220101  
Confirmation No.: 1502

Title: SURVEILLANCE SYSTEM AND METHODS REGARDING SAME

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22002

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We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):

- ☒ An itemized return postcard.  
☐ A Petition for Extension of Time for \_\_ month(s) and a check in the amount of \$\_\_ for the required fee.  
☒ An Information Disclosure Statement (3 pgs); copies of 2 applications; 1449 forms (4 pgs); and copies of 30 documents cited on the 1449 forms.  
☐ A check in the amount of \$\_\_, for \_\_.  
☐ A certified copy of a \_\_ application, Serial No. \_\_, filed \_\_\_\_, the right of priority of which is claimed under 35 U.S.C. §119.  
☐ Other:  
☐ Amendment ☐ No Additional fee is required. ☐ The fee has been calculated as shown:

| Fee Calculation for Claims Pending After Amendment                            |                                    |                             |                                   |                           |                          |
|---|------------------------------------|-----------------------------|-----------------------------------|---------------------------|--------------------------|
|   | Pending Claims after Amendment (1) | Claims Paid for Earlier (2) | Number of Additional Claims (1-2) | Cost per Additional Claim | Additional Fees Required |
| Total Claims  |                                    |                             |                                   | x \$18 =                  |                          |
| Independent Claims  |                                    |                             |                                   | x \$84 =                  |                          |
| One or More New Multiple Dependent Claims Presented? If Yes, Add \$280 Here → |                                    |                             |                                   |                           |                          |
| Total Additional Claim Fees Required  |                                    |                             |                                   |                           |                          |

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13-4895. Triplicate copies of this sheet are enclosed.

**CERTIFICATE UNDER 37 C.F.R. §1.8:** The undersigned hereby certifies that this Transmittal Letter and the paper(s), as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202, on this 16<sup>th</sup> day of July, 2002.

MUETING, RAASCH & GEBHARDT, P.A.

Customer Number: 26813



26813

PATENT TRADEMARK OFFICE

By:

Name: Mark J. Gebhardt

Reg. No.: 35,518

Direct Dial: 612-305-1216

Facsimile: 612-305-1228

(LARGE ENTITY TRANSMITTAL UNDER RULE 1.8)



PATENT  
Docket No. 115.00220101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

|                   |  |   |                 |            |
|-------------------|--|---|-----------------|------------|
| Applicant:        | Ioannis Pavlidis                                     | ) | Group Art Unit: | 2613       |
|                   |  | ) |                 |            |
| Serial No.:       | 10/034,696   | ) | Examiner:       | Unassigned |
| Confirmation No.: | 1502   | ) |                 |            |
|                   |  | ) |                 |            |
| Filed:            | December 27, 2001                                    | ) |                 |            |
|                   |  | ) |                 |            |
| For:              | <u>SURVEILLANCE SYSTEM AND METHOD REGARDING SAME</u> |   |                 |            |

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INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

Sir:

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with C.F.R. §§ 1.97 *et. seq.*, the materials enclosed herewith are brought to the attention of the Examiner as possibly being of interest in connection with the above-identified patent application. Consideration of each of the documents listed on the attached 1449 forms is respectfully requested. Pursuant to the provisions of M.P.E.P. § 609, Applicant further requests that a copy of the 1449 forms, marked as being considered and initialed by the Examiner, be returned with the next Official Communication.

Applicant also wishes to bring the Examiner's attention to the following pending U.S. Applications, as well as any prior art and any provisional U.S. patent applications referenced therein. A copy of each of the below-listed pending U.S. Patent Applications is provided herewith.

**Information Disclosure Statement**

Page 2 of 3

Applicant: Ioannis Pavlidis  
Serial No.: 10/034,696  
Confirmation No.: 1502  
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For: SURVEILLANCE SYSTEM AND METHODS REGARDING SAME

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**List of Pending Non-Published U.S. Patent Applications**

| Applicant(s)            | Application Number | Filing Date | Serial No. of Provisional Application to which listed Application claims priority |
|-------------------------|--------------------|-------------|---|
| Ioannis Pavlidis et al. | 10/034,780         | 12/27/01    | 60/302,020  |
| Ioannis Pavlidis et al. | 10/034,761         | 12/27/01    | 60/302,020  |
|                         |                    |             |   |

**List of Patent Application Publications**

| Applicant(s) | Patent Application Publication Number | Publication Date |
|--------------|---------------------------------------|------------------|
|              |                                       |                  |
|              |                                       |                  |
|              |                                       |                  |

It is believed that no fee is due, as this Information Disclosure Statement is filed prior to the receipt of any Action on the merits. However, in the event a fee is due, please charge any fee or credit any overpayment to Account No. 13-4895.

**Information Disclosure Statement**

Page 3 of 3

Applicant: Ioannis Pavlidis  
Serial No.: 10/034,696  
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Filed: December 27, 2001  
For: SURVEILLANCE SYSTEM AND METHODS REGARDING SAME

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The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number, if they can be of any assistance during prosecution of the present application.

Respectfully submitted for

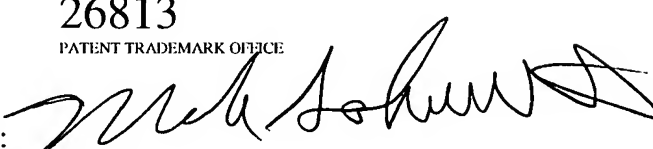
**Ioannis Pavlidis**

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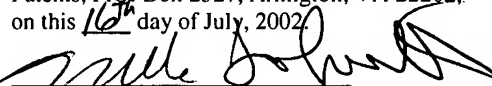
**26813**

PATENT TRADEMARK OFFICE

By:   
Mark J. Gebhardt  
Reg. No. 35,518  
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**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper is being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202, on this 16<sup>th</sup> day of July, 2002.

  
Mark J. Gebhardt

16 July 2002  
Date

|   |                                       |                               |
|---|---------------------------------------|-------------------------------|
| <b>INFORMATION<br/>DISCLOSURE<br/>STATEMENT</b> | <b>Atty. Docket No.:</b> 115.00220101 | <b>Serial No.:</b> 10/034,696 |
|   | <b>Applicant:</b> Ioannis Pavlidis    | <b>Confirmation No.:</b> 1502 |
|   | <b>Filing Date:</b> Dec. 27, 2001     | <b>Group:</b> 2613            |
| Information Disclosure Statement mailed:        |                                       | July <u>16</u> , 2002         |

**U.S. PATENT DOCUMENTS**

| Examiner<br>Initial | Document Number | Date | Name | Class | Subclass | Filing Date If<br>Appropriate |
|---------------------|-----------------|------|------|-------|----------|-------------------------------|
|                     | None            |      |      |       |          |                               |
|                     |                 |      |      |       |          |                               |

**FOREIGN PATENT DOCUMENTS**

| Examiner<br>Initial | Document Number | Date | Country | Class | Subclass | Translation |    |
|---------------------|-----------------|------|---------|-------|----------|-------------|----|
|                     |                 |      |         |       |          | Yes         | No |
|                     | None            |      |         |       |          |             |    |
|                     |                 |      |         |       |          |             |    |

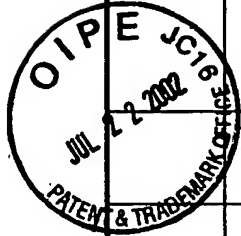
**OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)**

| Examiner<br>Initial | Document Description   |
|---------------------|--|
|                     | Anderson et al., "Change detection and tracking using pyramid transform techniques," <i>Intelligent Robots and Computer Vision: Proceedings of SPIE The International Society for Optical Engineering</i> , 1985; 579:72-78. ✓                   |
|                     | Blackman, <i>Multiple-Target Tracking with Radar Applications</i> , 1986, Artech House, Dedham, MA, Cover page, Publication page, and Table of Contents only. (7 pgs.). ✓  |
|                     | Buntine, "Learning classification trees," <i>Statistics and Computing</i> , 1992; 2:63-73. ✓   |
|                     | Collins et al., "A system for video surveillance and monitoring: Vsam final report," <i>Tech. Rep. CMU-RI-TR-00-12</i> , Robotics Institute, Carnegie Mellon Univ., Pittsburgh, PA, 2000, 1-68. ✓  |
|                     | Comaniciu et al., "Real-time tracking of non-rigid objects using mean shift," <i>Proceedings 2000 IEEE Conference on Computer Vision and Pattern Recognition</i> , Hilton Head Island, SC, 2000 June 13-15; 2:142-149. ✓                         |
|                     | Cox et al., "An efficient implementation of Reid's multiple hypothesis tracking algorithm and its evaluation for the purpose of visual tracking," <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 1996; 18(2):138-150. ✓ |

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|---|------------------------|
| <b>EXAMINER</b>   | <b>Date Considered</b> |
| <p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> |                        |

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| Information Disclosure Statement mailed:        |                                       | July <u>16</u> , 2002         |

| Examiner<br>Initial | Document Description   |
|---------------------|--|
|                     | Dempster et al., "Maximum likelihood from incomplete data via the EM algorithm (with discussion)," <i>Journal of the Royal Statistical Society B</i> , 1977, 39(1):1-38. ✓   |
|                     | Elgammal et al., "Non-parametric model for background subtraction," <i>Computer Vision – ECCV 2000</i> , Vernon, ed., Springer-Verlag, Berlin Heidelberg, 751-767. ✓   |
|                     | Gao et al., "Error analysis of background adaptation," <i>Proceedings 2000 IEEE Conference on Computer Vision and Pattern Recognition</i> , Hilton Head Island, SC, 2000 June; 1:503-510. ✓                                      |
|                     | Grimson et al., "Using adaptive tracking to classify and monitor activities in a site," <i>Proceedings 1998 IEEE Conference on Computer Vision and Pattern Recognition</i> , Santa Barbara, CA, 1998 June 23-25; 22-29. ✓        |
|                     | Haritaoglu et al., "W <sup>4</sup> S: A real-time system for detecting and tracking people in 2 1/2d," <i>Proceedings 5<sup>th</sup> European Conference on Computer Vision</i> , 1998 June 2-6; Freiburg, Germany, 1:877-892. ✓ |
|                     | Hartley et al., <i>Multiple View Geometry in Computer Vision</i> , 2000, Cambridge UP, Cover pg., Publication pg., and 69-116. ✓   |
|                     | Horn, <i>Robot Vision</i> , The MIT Press, Cambridge, Mass., 1986; Cover page, Publication page, Table of Contents, and 66-69. ✓   |
|                     | Jeffreys, <i>Theory of Probability</i> , Univ. Press, Oxford, 1948, Cover page, Publication page, and Table of Contents only. (4 pgs.) ✓   |
|                     | Kanade et al., "Advances in cooperative multi-sensor video surveillance," <i>Proceedings DARPA Image Understanding Workshop</i> , 1998 Nov. 20-23; Monterey Cali., 3-24. ✓   |
|                     | Kanatani, "Optimal homography computation with a reliability measure," <i>Proceedings of the IAPR Workshop on Machine Vision Applications</i> , 1998 Nov. 17-19; Makuhari, Chiba, Japan:426-429. ✓                               |
|                     | Kanatani, <i>Statistical Optimization for Geometric Computer Vision: Theory and Practice</i> , 1996, Elsevier Science, Amsterdam, Netherlands, Cover page, Publication page, and Table of Contents only. (7 pgs.). ✓             |



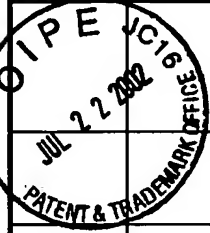
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| <b>EXAMINER</b>   | <b>Date Considered</b> |
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| Information Disclosure Statement mailed: July <u>14</u> , 2002 |                                       | Technology Center 2600        |

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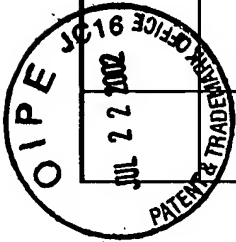
JUL 23 2002

| Examiner Initial  | Document Description  |
|---|---|
|  | Lee et al., "Monitoring activities from multiple video streams: Establishing a common coordinate frame," <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2000 Aug.; 22(8):758-767.              |
|   | Lin, "Divergence measures based on the shannon entropy," <i>IEEE Transactions on Information Theory</i> , 1991; 37(1):145-151. ✓  |
|   | McLachlan et al., <i>Mixture Models Interference and Applications to Clustering</i> , 1988, Marcel Dekker, New York. ✓  |
|   | Oliver et al., "A bayesian computer vision system for modeling human interactions," <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2000 Aug.; 22(8):831-843. ✓                                 |
|   | Ormoneit et al., "Learning and tracking human motion using functional analysis," <i>Proceedings 2000 IEEE Workshop on Human Modeling, Analysis, and Synthesis</i> , Hilton Head Island, SC, 2000 June; 2-9. (8 pgs.). ✓ |
|   | Pavlidis et al., "Urban Surveillance Systems: From the Laboratory to the Commercial World," <i>IEEE Proceedings</i> , 2001 Oct.; 89(10):1478-1497. ✓  |
|   | Ratches, "Aided and automatic target recognition based upon sensory inputs from image forming systems," <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 1997; 19(9):1004-1019. ✓                |
|   | Reid, "An algorithm for tracking multiple targets," <i>IEEE Transactions on Automatic Control</i> , 1979; 24(6):843-854. ✓  |
|   | Sacchi et al., "A distributed surveillance system for detection of abandoned objects in unmanned railway environments," <i>IEEE Transactions on Vehicular Technology</i> , 2000 Sept.; 49(5):2013-2026. ✓               |
|   | Stauffer et al., "Adaptive background mixture models for real-time tracking," <i>Proceedings 1999 IEEE Conference on Computer Vision and Pattern Recognition</i> , Fort Collins, Col., 1999 June 23-25; 2:246-252. ✓    |
|   | Stauffer et al., "Learning patterns of activity using real-time tracking," <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2000; 22(8):747-767. ✓   |

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|   |                                       | Information Disclosure Statement mailed: July <u>16</u> , 2002 |

| Examiner<br>Initial | Document Description  |
|---------------------|---|
|                     | Stringa et al., "Real-time video-shot detection for scene detection for scene surveillance applications," <i>IEEE Transactions on Image Processing</i> , 2000 Jan.; 9(1):69-79. ✓ |
|                     | Tsiamyrtzis, <i>A Bayesian Approach to Quality Control Problems</i> , Ph.D. thesis, School of Statistics, Minneapolis, MN, August 2000. ✓   |



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